

## SECTION 09690

### CARPET TILE

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#### LANL MASTER CONSTRUCTION SPECIFICATION

When editing to suit project, author shall add job-specific requirements and delete only those portions that in no way apply to the activity (e.g., a component that does not apply). To seek a variance from applicable requirements, contact the LEM Architectural POC.

When assembling a specification package, include applicable specifications from all Divisions, especially Division 1, General Requirements.

Delete information within "stars" during editing.

Specification developed for ML-3 / ML-4 projects. For ML-1 / ML-2, additional requirements and QA reviews are required.

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#### PART 1 GENERAL

##### 1.1 SECTION INCLUDES

- A. Carpet tiles, glue down adhesion.
- B. Accessories.

##### 1.2 SUBMITTALS

- A. Submit the following in accordance with the requirements of Section 01300.
  - 1. Catalog data on specified products, describing physical [and performance] characteristics; sizes, patterns, [colors available,] and method of installation.
  - 2. Manufacturer's certificate indicating that products meet or exceed the specified requirements and tests.
  - 3. Manufacturer's installation instructions indicating procedures for installing carpet products and accessories.
  - 4. Four carpet tiles illustrating color [and pattern design] for each carpet color selected.
  - 5. Shop drawings indicating layout of joints, direction of carpet weave and cut tiles.
  - 6. Maintenance data describing spot removal and maintenance procedures, recommended maintenance materials, and suggested schedule for cleaning and shampooing.
  - 7. Project warranty for all labor and materials, signed by Contractor, Installer and Manufacturer agreeing to repair or replace defective materials and workmanship of carpet installation during a [2] year period following final acceptance. Provide 10 year warranty against wear and lifetime warranty against loss of anti-static properties.

B. Sustainability

1. Submit manufacturer's documentation of recycled content for each product.
2. Submit documentation of manufacturer's buyback, and/or recycling program.
3. Submit manufacturer's documentation that adhesives, seam sealers, carpet and cushion meet the Carpet and Rug Institute (CRI) Indoor Air Quality (IAQ) Testing Programs (Green Label) or comply with the following total volatile organic compounds (VOC) emissions criteria:
  - a. Carpet not to exceed 0.5 milligrams per square meter per hour
  - b. Cushion not to exceed 1.0 milligrams per square meter per hour
  - c. Adhesives not to exceed 10.0 milligrams per square meter per hour
  - d. Seam Sealer not to exceed 10.0 milligrams per square meter per hour

1.3 QUALITY ASSURANCE

- A. Provide products of a company that specializes in manufacturing the projects specified in the Section.
- B. Use an installer approved by the manufacturer.
- C. Use an installer that has successfully completed at least [10] projects of similar size and scope to this project.

1.4 REGULATORY REQUIREMENTS

- A. Carpet tile, including backing, shall pass methenamine pill test in accordance with ASTM D2859.
- B. Carpet tile, including backing and accessories, shall have a minimum Class II rating, with a minimum critical radiant flux of 0.22 W/sq cm when tested according to ASTM E648 (NFPA 253) Radiant Panel Test.
- C. Carpet tile shall have an electro-static propensity rating of no more than 3.0 kV when tested in accordance with AATCC-134.

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“D” is a requirement for Health Care Facilities.

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- D. [Carpet shall have an electrical resistance in the range of 10 to the ninth to 25,000 ohms based on NFPA Sec. 99.]
- E. Carpet shall be certified with the CRI IAQ Carpet Testing Program Green Label, or tested for compliance to meet the CRI IAQ Carpet Testing Program requirements and criteria.

- F. Adhesive: shall be only those certified with the CRI IAQ Adhesive Testing Program Green Label or tested for compliance to meet the CRI IAQ Adhesive Testing Program requirements and criteria.
- G. [Carpet shall pass Decay Test FSTM 4046 for dissipating electrical charges.]
- H. [Carpet shall pass FTMS S01A/3231 for stain resistance with no noticeable stain.]
- I. [Carpet shall pass physical strength test ASTM D1335 with a tuft bind of 7 pounds.]
- J. [Carpet shall complete abrasion test ASTM D1175 with no appreciable sign of pilling or fuzzing.]
- K. [Carpet shall pass ASTM-138 (DDD C95A) for dimensional stability and have a grey scale of 4 or better for colorfastness.]
- L. [Carpet shall have a grey scale rating of at least 4 after completing AATCC 16E.]

#### 1.5 ENVIRONMENTAL REQUIREMENTS

- A. Store materials for 3 days prior to installation in area of installation, to achieve temperature stability.
- B. Maintain minimum 70 degrees F ambient temperature three days prior to, during, and 24 hours after installation of materials.

#### 1.6 EXTRA MATERIALS

- A. Provide [10 percent] of required quantity of carpet tiles of each color selected in their original containers.

### PART 2 PRODUCTS

#### 2.1 PRODUCT OPTIONS AND SUBSTITUTIONS

- A. Comply with Section 01630, Product Options and Substitutions.

#### 2.2 MANUFACTURERS - CARPET TILE

- A. Mohawk            Style [ Collegiate Modular ]
- B. Lees              Style [ L8512 First Step    ]
- C. Shaw             Style [ Madrid                    ]

## 2.3 CARPET TILE

- A. Carpet shall conform to the following criteria:

Construction	Tufted or Fusion Bonded
Pile Fiber	[BSF] [ANTRON]
Pile Height	[.125 to .3] inch
Face/Pile Weight	[28] oz/sq yd, minimum
Gage	[1/10 inch]
Stitch/inch	[10 - Cut] [8 - Loop]
Primary and Secondary Backing	Synthetic

- B. Recycled Content: Renewed nylon carpet, which is cleaned, retextured, recolored, or otherwise reused to produce new nylon carpet is acceptable; otherwise comply with the following recycled content requirements:

1. Nylon Carpet Face Fiber: 25 percent minimum total recovered materials content.
2. Nylon Carpet Backing: For vinyl primary backing use the highest percentage of total recovered materials contents available; however, 0% is not acceptable.
3. Polymeric Cushion: Preference will be given to recycled content cushion backings.

- C. All materials must be 100% recyclable.

- D. Provide carpet manufactured in 1 dye lot.

- E. Indoor Air Quality

1. Carpet: shall be only those certified with the CRI IAQ Carpet Testing Program Green Label, or tested for compliance to meet the CRI IAQ Carpet Testing Program requirements and criteria.
2. Adhesives: shall be only those certified with the CRI IAQ Adhesive Testing Program Green Label or tested for compliance to meet the CRI IAQ Adhesive Testing Program requirements and criteria.
3. All products (carpet, seam sealer, cushion and adhesives) from current production must be retested on a quarterly basis to ensure continuing compliance with CRI IAQ test program requirements.

- F. [Color (s) will be selected by LANL from the manufacturer's standard colors.]

## 2.4 ACCESSORIES

- A. Sub-Floor Filler: [White premix latex] [ ]; type recommended by carpet manufacturer for specific substrate material.

- B. Installation Adhesive: Releasable type adhesive as recommended by carpet manufacturer and which complies with CRI Green Label and flammability requirements for installed carpet tiles.
- C. Products:
  - 1. Blue Glue – 3M Company
  - 2. Durabond - D-870
  - 3. Roberts - 2077
  - 4. Henry - #630 Special Purpose
- D. Carpet Edge Guard, Metallic: Extruded aluminum bend-down type edge guard with concealed gripper teeth and minimum 1 1/2 inch wide anchorage flange and minimum 5/8 inch wide face flange. Provide with anodized aluminum finish of colors selected by LANL from among standard colors available within the industry.
- E. Carpet Edge Guard, Non-metallic: Extruded or molded heavy-duty vinyl or rubber carpet edge guard of size and profile indicated, with a minimum 2 inch wide anchorage flange; colors selected by LANL from among standard colors available within the industry.

## PART 3 EXECUTION

### 3.1 EXAMINATION

- A. Verify that substrate surfaces are smooth and flat with maximum variation of 1/8 inch in 10 feet and are ready to receive work before beginning installation.
- B. Verify concrete floors are dry to a maximum moisture content of [7] percent; and do not exhibit alkalinity, carbonization, or dusting before beginning installation.

### 3.2 PREPARATION

- A. Remove sub-floor ridges and bumps. Fill low spots, cracks, and other defects with sub-floor filler.
- B. Apply, trowel, and float filler to leave smooth, flat, hard surface.
- C. Prohibit traffic until filler is cured.
- D. Vacuum floor surface.

### 3.3 INSTALLATION

- A. Install carpet tile, any accessories and adhesive in accordance with manufacturers' instructions.

- B. Integrate and blend carpet tiles from different cartons to ensure minimal variation in color match.
- C. Cut carpet tiles straight. Fit carpet tight to intersection with vertical surfaces without gaps.
- D. Lay out carpet tile to [linear] pattern.
- E. Locate change of color or pattern between rooms under door centerline.
- F. Install carpet tile with nap running in same direction.

#### 3.4 CLEANING

- A. Remove and dispose of debris and recycle all unusable scraps.
- B. Remove excess adhesive from surfaces.
- C. Clean and vacuum carpet surfaces.

#### 3.5 PROTECTION OF FINISHED WORK

- A. Do not permit traffic over unprotected floor surface.
- B. Protect installed carpet tiles with a non-staining building paper. Do not use plastic or any other moisture barrier.
- C. Manufacturer:
  - 1. Seekure

#### 3.6 CARPET REMOVAL

- A. All carpet tile and scraps removed from LANL projects shall be recycled or reapplied. Disposal of product in landfill is not permitted.
- B. Vacuum in-place carpet with industrial vacuum prior to demolition or debris-producing renovation.
- C. Remove carpet.
- D. Stack on pallets for handling.
- E. Store carpet off ground and under cover to prevent contamination of materials by water, foreign matter, or other causes.

F. Coordinate with manufacturer for pick-up for recycle. In the case that the manufacturer does not have a recycling program, contact an independent recycling program such as:

1. BASF 6ix Again: (800 839-3233) or [www.basf.com](http://www.basf.com)
2. Collins & Aikman floor carpet buyback program: (800 248-2878) or [www.powerbond.com](http://www.powerbond.com)
3. Dupont-Partnership for Reclamation: (800 328-7719) or [www.dupontcommercial.com](http://www.dupontcommercial.com)
4. Honeywell/Evergreen Nylon Recycling: (804 520-3564) or [www.n6recycling.com](http://www.n6recycling.com)
5. Shaw Inc./Inforum: (877 5027429) or [www.shawcontract.com](http://www.shawcontract.com)

### 3.7 SCHEDULES

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Provide a schedule when different carpet types or colors are utilized. The following examples may assist in developing such a schedule.

- A. Foyer: 24 x 24 inch tiles, Type A, scarlet.
- B. Corridor 110: 24 x 24 inch tiles, Type B, cream.

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### END OF SECTION

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Do not delete the following reference information:

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### FOR LANL USE ONLY

This project specification is based on LANL Master Construction Specification Rev 2, dated January 16, 2003.

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This specification does not address anti-static carpet. A variance is required for the use of anti-static carpet. If anti-static carpet is accepted the follow changes will be required to this specification:

- Make the following change to 1.4 Regulatory Requirements  
Change 3.0 kV to 2.0 kV for anti-static carpet requirements.
- Make the following change to 2.2 MANUFACTURERS - CARPET
  - A Julie Industries Style [ Static Smart ESD ]
  - B Ultrastat 2000 Inc. Style [ X-O Stat 4375 ]
- Make the following change to 2.3 Carpet  
Use Face/Pile Weight of [24].
- Add the following to 3.3 Installation
  - A. Connect copper foil grounding strap to electrical ground every 1,000 square feet.

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